



# Environmental Services

*Your Business Decision Partner*

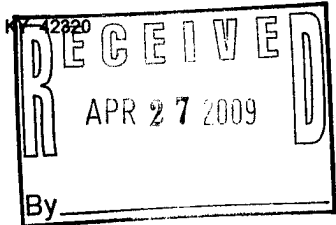


Perdue Farms Incorporated  
(270) 274-6073

David G. Jurgens  
Fax (207) 274-6071

5025 Hwy 231 S.  
email dave.jurgens@perdue.com

Beaver Dam KY 40009



April 21, 2009

**RE: Re-issue KPDES Permit Application**

Vickie L. Prather  
Division of Water  
Surface Water Permits Branch  
PS Section  
200 Fair Oaks Lane, 4<sup>th</sup> Floor  
Frankfort, KY 40601

Dear Ms. Prather:

Please find the following enclosed:

1. Form 1
2. USGS Topographic map.
3. Form SC
4. Schematic of the process
5. Check made to the order of the "Kentucky State Treasurer" in the amount of \$ 3,200

If any questions arise feel free to call me at the above telephone number.

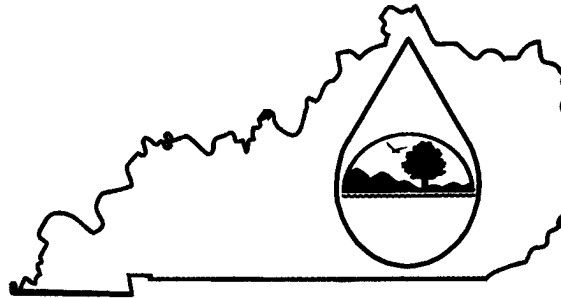
Sincerely,

David G. Jurgens  
Manager, Environmental Services

# **KPDES FORM 1**

*AI# 3/12*

## **KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM**



### **PERMIT APPLICATION**

This is an application to: (check one)

- ☐ Apply for a new permit.
- ☒ Apply for reissuance of expiring permit.
- ☐ Apply for a construction permit.
- ☐ Modify an existing permit.

Give reason for modification under Item II.A.

A complete application consists of this form and one of the following:

Form A, Form B, Form C, Form F, or Form SC

For additional information contact:

KPDES Branch (502) 564-3410

*OK 3200*

<b>I. FACILITY LOCATION AND CONTACT INFORMATION</b>		AGENCY USE		0102385	
A. Name of Business, Municipality, Company, Etc. Requesting Permit Perdue Farms Incorporated					
B. Facility Name and Location			C. Primary Mailing Address (all facility correspondence will be sent to this address). Include owner's mailing address (if different) in D.		
Facility Location Name:			Facility Contact Name and Title: Mr. <input checked="" type="checkbox"/> Ms. <input type="checkbox"/>		
Perdue Farms; Livermore Feedmill P.O. 484			David Jurgens, Manager of Environmental Services		
Facility Location Address (i.e. street, road, etc., not P.O. Box):			Mailing Address:		
101 KY HWY 2110			5025 Hwy 231 S.		
Facility Location City, State, Zip Code:			Mailing City, State, Zip Code:		
Livermore, KY 42352			Beaver Dam, KY. 42320		
D. Owner's name (if not the same as in part A and C):			Facility Contact Telephone Number:		
			270 274 6073		
Owner's Mailing Address:			Owner's Telephone Number (if different):		
			270 278 8601		
<b>II. FACILITY DESCRIPTION</b>					
A. Provide a brief description of activities, products, etc: Production and Distribution of Chicken Feed					
B. Standard Industrial Classification (SIC) Code and Description					
Principal SIC Code & Description:		2048 Prepared Feeds, NEC			
Other SIC Codes:		N/A		N/A	

<b>III. FACILITY LOCATION</b>	
A. Attach a U.S. Geological Survey 7 1/2 minute quadrangle map for the site. (See instructions)	
B. County where facility is located: McLean	City where facility is located (if applicable): Livermore, KY
C. Body of water receiving discharge: Green River	
D. Facility Site Latitude (degrees, minutes, seconds): 37 28 47.7	Facility Site Longitude (degrees, minutes, seconds): 87 08 20.9
E. Method used to obtain latitude & longitude (see instructions): G40 Handheld Receiver	
F. Facility Dun and Bradstreet Number (DUNS #) (if applicable):	

**IV. OWNER/OPERATOR INFORMATION****A. Type of Ownership:**

☐ Publicly Owned ☒ Privately Owned ☐ State Owned ☐ Both Public and Private Owned ☐ Federally owned

**B. Operator Contact Information (See instructions)**

Name of Treatment Plant Operator:

David G. Jurgens

Telephone Number:

270 274 6073

Operator Mailing Address (Street):

5025 Hwy 231 S.

Operator Mailing Address (City, State, Zip Code):

Beaver Dam, KY 42320

Is the operator also the owner?

Yes ☐ No ☒

Is the operator certified? If yes, list certification class and number below.

Yes ☒ No ☐

Certification Class:

Class II Wastewater

Certification Number:

9251 Exp. 6/30/09

**V. EXISTING ENVIRONMENTAL PERMITS**

Current NPDES Number:

KY 0102385

Issue Date of Current Permit:

9/1/05

Expiration Date of Current Permit:

Number of Times Permit Reissued:

2

Date of Original Permit Issuance:

3/1/98

Sludge Disposal Permit Number:

N/A

Kentucky DOW Operational Permit #:

N/A

Kentucky DSMRE Permit Number(s):

N/A

Which of the following additional environmental permit/registration categories will also apply to this facility?

CATEGORY	EXISTING PERMIT WITH NO.	PERMIT NEEDED WITH PLANNED APPLICATION DATE
Air Emission Source	S - 08 - 024	
Solid or Special Waste	Dredging 200500197	
Hazardous Waste - Registration or Permit	N/A	

**VI. DISCHARGE MONITORING REPORTS (DMRs)**

KPDES permit holders are required to submit DMRs to the Division of Water on a regular schedule (as defined by the KPDES permit). Information in this section serves to specifically identify the name and telephone number of the DMR official and the DMR mailing address (if different from the primary mailing address in Section I.C).

A. DMR Official (i.e., the department, office or individual designated as responsible for submitting DMR forms to the Division of Water):	David G. Jurgens
DMR Official Telephone Number:	270 274 6073

**B. DMR Mailing Address:**

- Address the Division of Water will use to mail DMR forms (if different from mailing address in Section I.C), or
- Contact address if another individual, company, laboratory, etc. completes DMRs for you; e.g., contract laboratory address.

DMR Mailing Name:	David G. Jurgens; Mgr. Environmental Services
DMR Mailing Address:	5025 Hwy. 231 S.
DMR Mailing City, State, Zip Code:	Beaver Dam, KY. 42320

## VII. APPLICATION FILING FEE

KPDES regulations require that a permit applicant pay an application filing fee equal to twenty percent of the permit base fee. Please examine the base and filing fees listed below and in the Form 1 instructions and enclose a check payable to "Kentucky State Treasurer" for the appropriate amount (for permit renewals, please include the KPDES permit number on the check to ensure proper crediting). Descriptions of the base fee amounts are given in the "General Instructions."

Facility Fee Category:

Major Industry

Filing Fee Enclosed:

\$ 3,200

## VIII. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (type or print):

Mr. ☒ Ms. ☐ David G. Jurgens *SENIOR ENV. MGR.*

SIGNATURE

*David G. Jurgens*

TELEPHONE NUMBER (area code and number):

270 274 6073

DATE:

4/17/09

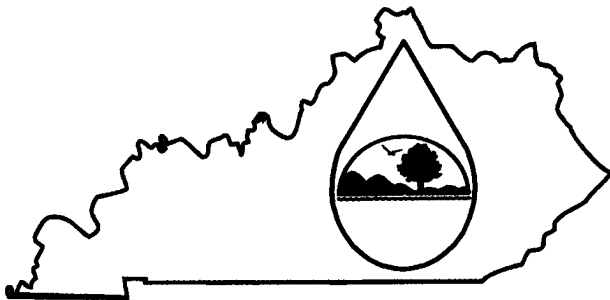
Return completed application form and attachments to: **KPDES Branch, Division of Water, Frankfort Office Park, 14 Reilly Road, Frankfort, KY 40601. Direct questions to: KPDES Branch at (502) 564-3410.**

# KPDES FORM SC

AI# 3112

## KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

### PERMIT APPLICATION



A complete application consists of this form and Form 1.  
For additional information, contact: KPDES Branch, (502) 564-3410.

NAME OF FACILITY: Perdue Farms, Incorporated											
<b>I. FACILITY DISCHARGE FREQUENCY</b>				AGENCY USE	0	1	0	2	3	8	5
A. Do discharge(s) occur all year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (Complete Item IX for intermittent discharges.)											
B. How many days per week?				7							
II. A. Give the basis of design for sizing of the wastewater facility (see instructions): Sizing is based on amount of boiler blowdown (2500 gpd), the amount of water needed for water softener regeneration (500 gpd), and stormwater from secondary containment (50 gpd).											
B. If new discharger, indicate anticipated discharge date:											
C. Indicate the design capacity of the treatment system:				.0030 MGD							

### III. Outfall Location (see instructions)

Outfall (list)	LATITUDE			LONGITUDE			RECEIVING WATER (name)
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
001	37	28	55.5	87	08	30.3	Green River
Method used to obtain latitude/longitude (i.e. GPS unit, USGS topographic map coordinates, etc.)				G40 Handheld Receiver			

IV. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES (see instructions)				
If wastewater other than domestic or sanitary is listed, complete page 4 in addition to page 1 and 2.				
OUTFALL NO. (list)	OPERATION(S) CONTRIBUTING FLOW		TREATMENT	
	Operation (list)	Avg/Design Flow (include units)	List treatment components	List Codes from Table SC-1
001	Boiler Blowdown	.00144 MGD	pH adjustment, Equalization	1Y, 2K, 4A
	Softner Regeneration	.0002 MGD	pH adjustment, Equalization	1Y, 2K, 4A
	Stormwater from secondary containment.	.00001 MGD		

**V. Check the type(s) of wastewater discharged.**

- ☐ Domestic (60% or more sanitary sewage)
 ☐ Oil field waste
 ☐ Noncontact cooling water
 ☒ Other (list): Boiler Blowdown, Softner Regeneration, and stormwater from secondary containment

**VI. Does all water used at facility (except for human consumption) flow to a treatment plant?** ☐ Yes ☒ No

**VII. Discharge to other than surface waters. Check appropriate location:**

- ☐ Publicly-owned lake or impoundment      Name of lake: \_\_\_\_\_  
☐ Publicly-owned treatment works (POTW).      Name of POTW: \_\_\_\_\_  
☐ Land application of Effluent  
☐ Surface injection (Check term and identify on map) ☐ lateral field; ☐ sinkhole; ☐ sinking stream; ☐ deep well  
☐ Closed Circuit (Check appropriate term) ☐ Holding tank; ☐ Mechanical evaporation; ☐ Waste impoundment

**VIII. Check the metals present in the discharge if applicable and indicate the quantity discharged per year. (Indicate units).**

<input type="checkbox"/>	Antimony	NA
<input type="checkbox"/>	Arsenic	NA
<input type="checkbox"/>	Beryllium	NA
<input type="checkbox"/>	Cadmium	NA
<input type="checkbox"/>	Chromium	NA

<input type="checkbox"/>	Copper	NA
<input type="checkbox"/>	Lead	NA
<input type="checkbox"/>	Mercury	NA
<input type="checkbox"/>	Nickel	NA
<input type="checkbox"/>	Selenium	NA

<input type="checkbox"/>	Silver	NA
<input type="checkbox"/>	Thallium	NA
<input type="checkbox"/>	Zinc	NA
<input type="checkbox"/>		
<input type="checkbox"/>		

**IX. INTERMITTENT DISCHARGES (Complete this section for intermittent discharges.)**

A. Number of bypass points:

(If bypass points are indicated, information below must be completed for each bypass.)

Check when bypass occurs:	<input type="checkbox"/> Wet Weather	<input type="checkbox"/> Dry Weather
Give the number of bypass incidents	per year	per year
Give average duration of bypass	hours	hours
Give average volume per incident	1,000 gallons	1,000 gallons
Give reason why bypass occurs:		

B. Number of Overflow Points:

(If discharge is from an overflow point, the information below must be completed.)

Check when overflow occurs:	<input type="checkbox"/> Wet Weather	<input type="checkbox"/> Dry Weather
Give the number of overflow incidents:	per year	per year
Give average duration of overflow:	hours	hours
Give average volume per incident:	1,000 gallons	1,000 gallons

C. Number of seasonal discharge points	
Give the number of times discharge occurs per year	
Give the average volume per discharge occurrence	(1,000 gallons)
Give the average duration of each discharge	(days)
List month(s) when the discharge occurs	

**X. AREA SERVED (see instructions)**

NAME	ACTUAL POPULATION SERVED
Livermore Feedmill	
<b>TOTAL POPULATION SERVED</b>	15

(PLEASE COMPLETE THIS PAGE IF OTHER THAN DOMESTIC WASTEWATER IS DISCHARGED)

**XI. COOLING WATER ADDITIVES AND THEIR COMPOSITIONS**

Additive	Composition	Concentration (mg/l)
See MSDS Sheets		

**XII. EFFLUENT CHARACTERISTICS**

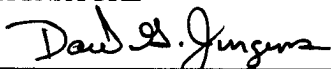
A. Indicate results of analysis for pollutants listed below.

POLLUTANT/PARAMETER	MAX DAILY VALUE	AVG DAILY VALUE	NUMBER OF SAMPLES
BOD <sub>5</sub>	2 mg/l	2 mg/l	1
TOTAL SUSPENDED SOLIDS	26.5 mg/l	7.7 mg/l	12
FECAL COLIFORM	25 MPN	25 MPN	1
TOTAL RESIDUAL CHLORINE	.02 mg/l	0.11 mg/l	12
OIL AND GREASE	1.8 mg/l	2.0 mg/l	11
CHEMICAL OXYGEN DEMAND	9.91 mg/l	9.91 mg/l	1
TOTAL ORGANIC CARBON	1.8 mg/l	1.8 mg/l	1
AMMONIA	0.17 mg/l	0.17 mg/l	1
DISCHARGE FLOW	0.0345 MGD	.0053 MGD	147
pH	8.95	7.8	12
TEMPERATURE (WINTER)	31.4 C	25.8 C	6
TEMPERATURE (SUMMER)	30.9 C	28.4 C	6

B. Frequency and duration of flow: Treated wastewater pumps from two sumps off of floats 24 hrs/day 365 days/year.

**XIII. CERTIFICATION**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (type or print): DAVID G. JURGENS, SENIOR ENV. MGR.	TELEPHONE NUMBER (area code and number): 270 274 6073
SIGNATURE 	DATE 4/21/09



## **Technical Data**

# LIVERMORE QUADRANGLE KENTUCKY

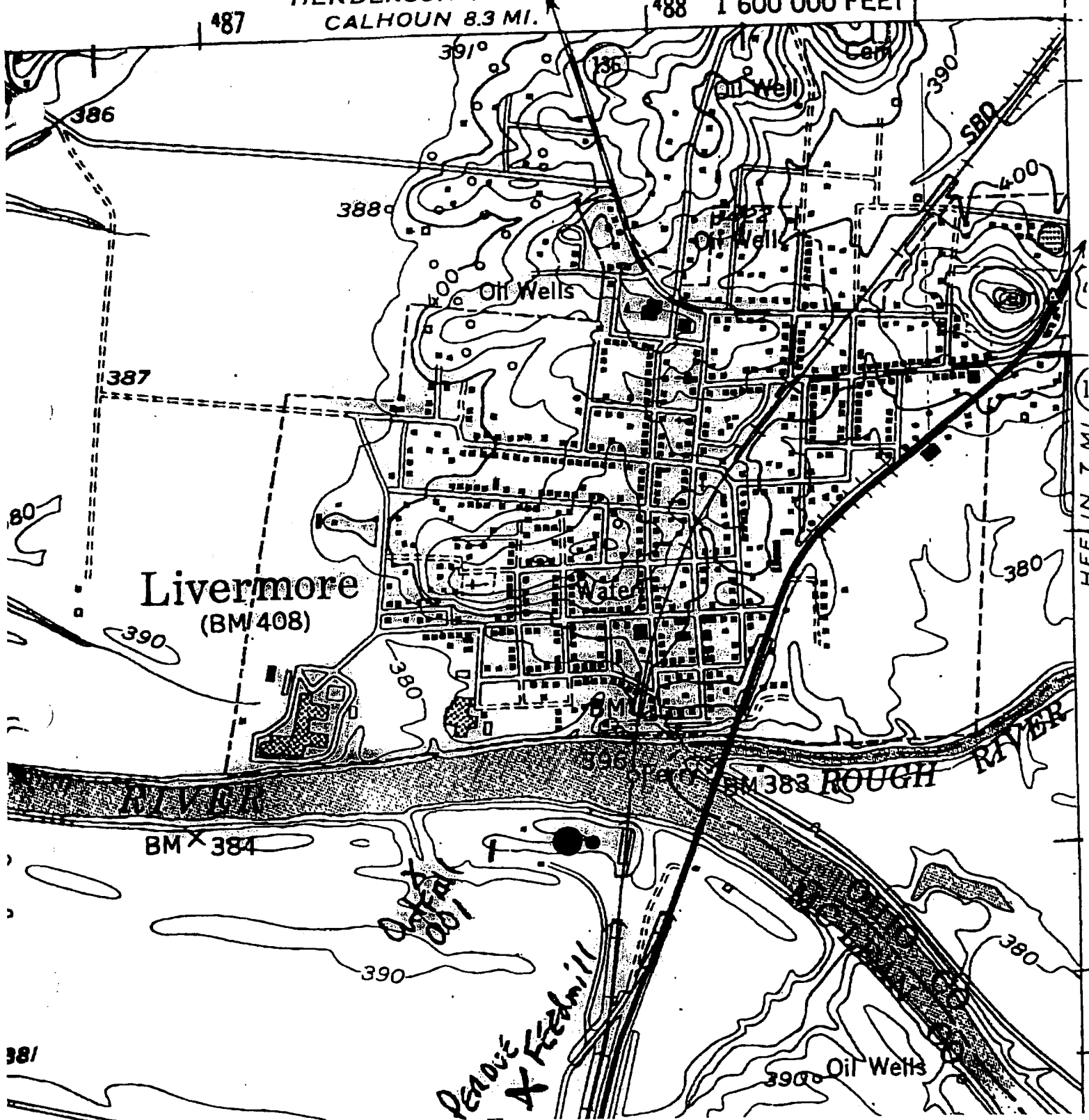
## 7.5 MINUTE SERIES (TOPOGRAPHIC)

### NW/4 CENTRAL CITY 15' QUADRANGLE

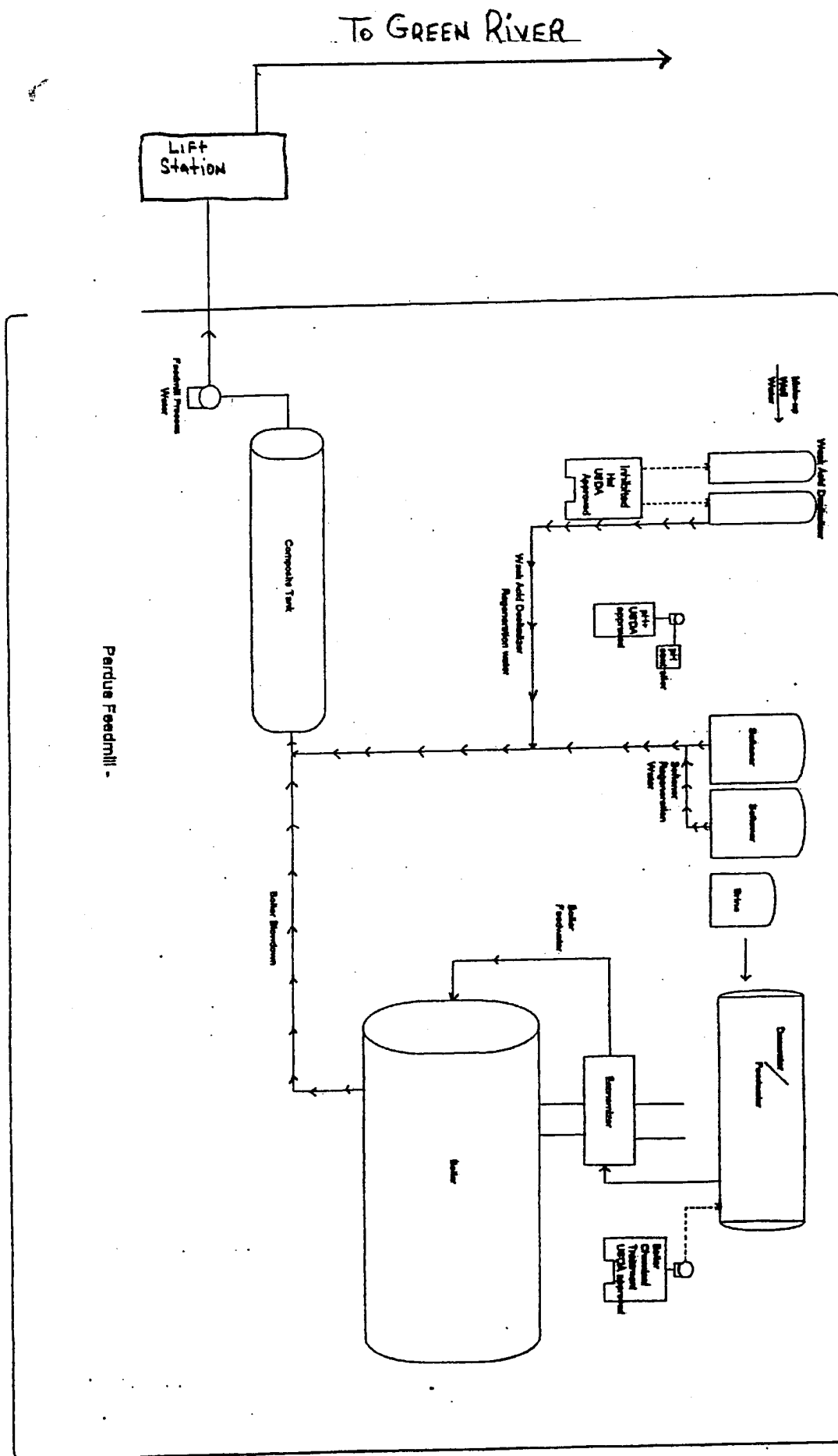
HENDERSON 41 MI.  
CALHOUN 8.3 MI.

488 1 600 000 FEET

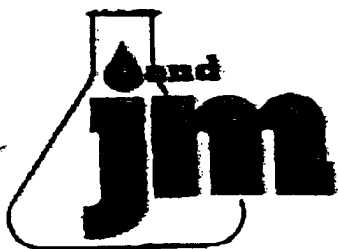
87°07'



# **Drawing**



# **MSDS Sheets**



**LABORATORIES, INC.**  
1717 ROWAN LOUISVILLE, KY 40203  
PHONE (502) 585-3176 FAX (502) 585-3216  
(800) 473-6173

November 5, 1997

PERDUE FARMS, Inc.  
P.O. Box 1537 / Zion Church Road  
Salisbury, MD 21802-1537  
Attn: Mr. Martin Stewart

Re: Effluent Composition at Perdue Feedmill, Livermore, KY

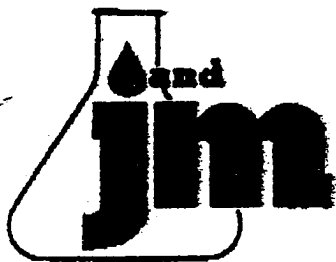
Estimated Water Composition (Boiler Blowdown and Softener Regeneration)

Conductivity.....	4500 uS/cm
pH.....	7.0
TSS.....	30
Chlorides.....	1200 mg/L
Sodium.....	1000 mg/L
Calcium Carbonate.....	50 mg/L
Ethyldimethyl tetraacetic Acid.....	4 mg/L
Hydroxyethylidene diphosphoric Acid.....	5 mg/L
Cyclohexylamine.....	<1 mg/L
Iron.....	<1 mg/L
BOD.....	<5 mg/L
COD.....	<5 mg/L
Phosphate.....	0 mg/L

Please contact me if I may be of further assistance in any way.

Sincerely,

Ted K. Mitzlaff



**LABORATORIES, INC.**  
1717 ROWAN LOUISVILLE, KY 40203  
PHONE (502) 585-3176 FAX (502) 585-3216  
(800) 473-6173

## **MATERIAL SAFETY DATA SHEET**

**PRODUCT: 1104**

**EFFECTIVE DATE: MARCH 6, 1995**

### **I. IDENTIFICATION**

**PRODUCT NAME: 1104**

**CHEMICAL NAME: TLV Sodium Bisulfite 5 mg/m3**

### **II. PHYSICAL DATA**

**pH.....3.0 - 5.0**  
**Appearance .....Clear, pink liquid**  
**Odor.....Sulfurous**  
**Boiling Point.....Decomposed > 150 C**  
**Solubility (in water) .....Not available**  
**Density.....1.48 g/ml**

### **III. FIRE AND EXPLOSION DATA**

**FLASH POINT: > 212 Deg F**

**FLAMMABLE LIMITS: N/A**

**EXTINGUISHING MEDIA: Water fog, carbon dioxide, foam, dry chemical.**

**SPECIAL FIREFIGHTING PROCEDURES: Wear self-contained breathing apparatus.**

**UNUSUAL FIRE AND EXPLOSION HAZARDS: None.**

### **IV. REACTIVITY DATA**

**STABILITY: Will decompose slowly in air.**

**CONDITIONS TO AVOID: Contamination of any kind.**

**INCOMPATIBILITY: Oxidizers, acids.**

**DECOMPOSITION OF PRODUCTS: Oxides of sulfur and sodium.**

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## V. HEALTH AND HAZARD DATA

**CARCINOGENIC POTENTIAL:** This material is not considered to be a carcinogen by the National Toxicology Program, the International Agency for Research on Cancer, or the Occupational Safety and Health Administration.

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## VI. EMERGENCY AND FIRST AID INSTRUCTIONS

**SKIN CONTACT:** Wash exposed area with plenty of soap and water. Repeat washing. Rinse exposed area for at least 15 minutes. Consult a health care professional. If clothing comes in contact with the product, the clothing should be removed immediately and should be laundered before reuse.

**EYE CONTACT:** Flush immediately with copious amounts of tap water or normal saline (minimum) of 15 minutes. Take exposed individual to a health care professional.

**INHALATION:** If a person experiences nausea, headache or dizziness, immediately move exposed individual to fresh air. If individual has difficulty in breathing or is cyanotic administer oxygen if available. Call a physician.

**INGESTION:** DO NOT INDUCE VOMITING. Rinse mouth with copious amounts of water or milk first. Then slowly dilute stomach contents with 6 to 8 ounces of water. In cases where the individual is semiconscious, comatose or convulsing, DO NOT GIVE FLUIDS BY MOUTH. Contact a physician immediately.

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## VII. SPILL, DISPOSAL, AND FIRE PROCEDURES

**SPILL PROCEDURES:** Initially minimize the area effected by the spill or leak. Block any potential routes to water systems. Assess the impact on contaminated environments and minimize any adverse effects. Contact your J & M representative immediately. Determine if federal, state, and/or local release notification is required. Recover as much of the pure product as possible into appropriate containers. Clay, soil, or commercially available absorbents may be used to recover any material that can not readily be recovered as pure product. Contact the person(s) responsible for the operation of your facility's industrial sewer system prior to intentionally flushing or pumping spills or leaks of this product to the industrial sewer if applicable.

**DISPOSAL PROCEDURES:** Follow all federal, state, and local regulations governing the disposal of waste materials. Determine if waste containing this product can be handled by available industrial effluent system or other on-site waste management. This product is not specifically listed in 40 CFR 261 as a Resources Conservation and Recovery Act hazardous waste. However, spill or leak residuals may meet the criteria of a characteristic hazardous waste under this Act.



**CONTAINER DISPOSAL:** J & M LABORATORIES will accept any empty drum assuming no foreign matter has been placed therein, and assuming the drum is in satisfactory condition.

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### VIII. SPECIAL PROTECTION INFORMATION

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**RESPIRATORY PROTECTION:** Filtration masks must be used if the TLV residual is exceeded.

**VENTILATION:** General (mechanical) room ventilation is expected to be satisfactory.

**PROTECTIVE GLOVES:** Wear impervious gloves and safety shoes as a standard handling precaution.

**EYE PROTECTION:** Wear safety glasses or goggles as a standard safety precaution.

**OTHER PROTECTIVE EQUIPMENT:** Wear acid-resistant apron.

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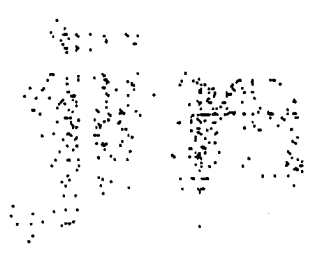
### IX. SPECIAL PRECAUTIONS

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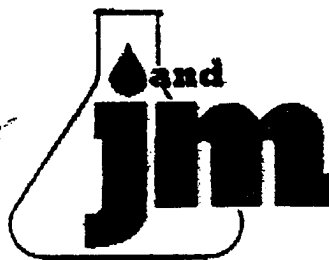
**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Keep containers tightly closed when not in use. Follow normal procedures for safe industrial handling and storage.

**OTHER PRECAUTIONS:** None necessary.

**HEALTH:** 1  
**REACTIVITY:** 0  
**FLAMMABILITY:** 0



*NOTE--The opinions expressed are those of qualified experts within J & M. We believe that the information contained is current as of the date of this Material Safety Data Sheet. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of J & M, it is the user's obligation to determine the conditions of the safe use of the product.*



**LABORATORIES, INC.**  
1717 ROWAN LOUISVILLE, KY 40203  
PHONE (502) 585-3176 FAX (502) 585-3216  
(800) 473-6173

## **MATERIAL SAFETY DATA SHEET**

**PRODUCT: 1299**

**EFFECTIVE DATE: JULY 10, 1991**

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### **I. IDENTIFICATION**

**PRODUCT NAME:** 1299

**CHEMICAL NAME:** Sodium Polyacrylate, Phosphoric Acid, Polyalkalene Glycol, Acrylamide, Polymaleic Acid, Potassium Hydroxide, 1-Hydroxyethylidene-1,1-diphosphonic Acid, Ethylenediaminetetraacetic Acid, Sodium Sulfite

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### **II. PHYSICAL DATA**

pH ..... 11.5 - 12.5  
Appearance ..... clear yellow liquid  
Odor ..... slight  
Solubility (in water) ..... complete

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### **III. FIRE AND EXPLOSION DATA**

**FLASH POINT:** not applicable

**FLAMMABLE LIMITS:** not applicable

**EXTINGUISHING MEDIA:** water fog, carbon dioxide, foam, dry chemical

**SPECIAL FIRE FIGHTING PROCEDURES:** wear self contained breathing apparatus

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** none known

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#### IV. REACTIVITY DATA

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**STABILITY:** stable

**CONDITIONS TO AVOID:** contamination of any kind

**INCOMPATIBILITY:** strong acids, strong oxidizers, materials reactive with hydroxyl compounds, strong bases

**DECOMPOSITION OF PRODUCTS:** carbon monoxide, carbon dioxide, nitrogen oxides, phosphines

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#### V. HEALTH AND HAZARD DATA

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**CARCINOGENIC POTENTIAL:** This material is not considered to be a carcinogen by the National Toxicology Program, the International Agency for Research on Cancer, or the Occupational Safety and Health Administration.

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#### VI. EMERGENCY AND FIRST AID INSTRUCTIONS

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**SKIN CONTACT:** Wash exposed area with plenty of soap and water. Repeat washing. Rinse exposed area for at least 15 minutes. Consult a health care professional. If clothing comes in contact with the product, the clothing should be removed immediately and should be laundered before reuse.

**EYE CONTACT:** Flush immediately with copious amounts of tap water or normal saline (minimum) of 15 minutes. Take exposed individual to a health care professional.

**INHALATION:** If a person experiences nausea, headache or dizziness, immediately move exposed individual to fresh air. If individual has difficulty in breathing or is cyanotic administer oxygen if available. Call a physician.

**INGESTION: DO NOT INDUCE VOMITING:** Rinse mouth with copious amounts of water or milk first. Then slowly dilute stomach contents with 6 to 8 ounces of water. In cases where the individual is semiconscious, comatose or convulsing, DO NOT GIVE FLUIDS BY MOUTH. Contact a physician immediately.

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#### VII. SPILL, DISPOSAL, AND FIRE PROCEDURES

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any material that can not readily be recovered as pure product. Contact the person(s) responsible for the operation of your facility's industrial sewer system prior to intentionally flushing or pumping spills or leads of this product to the industrial sewer if applicable.

**DISPOSAL PROCEDURES:** Follow all federal, state, and local regulations governing the disposal of waste materials. Determine if waste containing this product can be handled by available industrial effluent system or other on-site waste management. This product is not specifically listed in 40 CFR 261 as a Resources Conservation and Recovery Act hazardous waste. However, spill or leak residuals may meet the criteria of a characteristic hazardous waste under this Act.

**CONTAINER DISPOSAL:** J & M LABORATORIES will accept any empty drum assuming no foreign matter has been placed therein, and assuming the drum is in satisfactory condition.

---

## VIII. SPECIAL PROTECTION INFORMATION

---

**RESPIRATORY PROTECTION:** none required

**VENTILATION:** General (mechanical) room ventilation is expected to be satisfactory

**PROTECTIVE GLOVES:** wear impervious gloves as a standard handling precaution

**EYE PROTECTION:** wear safety glasses or goggles as a standard safety precaution

**OTHER PROTECTIVE EQUIPMENT:** chemical resistant apron

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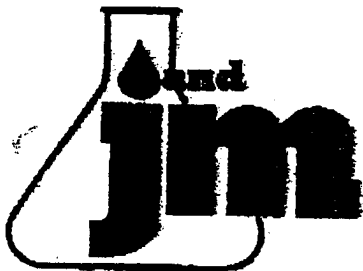
## IX. SPECIAL PRECAUTIONS

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**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Avoid storage in areas of extreme heat. Keep containers tightly closed when not in use.

**OTHER PRECAUTIONS:** None required

*NOTE—The opinions expressed are those of qualified experts within J & M. We believe that the information contained is current as of the date of this Material Safety Data Sheet. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of J & M, it is the user's obligation to determine the conditions of the safe use of the product.*



**LABORATORIES, INC.**  
1717 ROWAN LOUISVILLE, KY 40203  
PHONE (502) 585-3176 FAX (502) 585-3216  
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**MATERIAL SAFETY DATA SHEET**

**PRODUCT: 1500**

**EFFECTIVE DATE: JUNE 11, 1991**

**I. IDENTIFICATION**

**PRODUCT NAME: 1500**  
**CHEMICAL NAME: morpholine, cyclohexylamine, and diethylethanolamine**

**II. PHYSICAL DATA**

**pH..... > 11.5**  
**Appearance..... clear, gold liquid**  
**Odor..... ammonical**  
**Solubility (in water)..... completely miscible**  
**Melting Point..... < -8 C**

**III. FIRE AND EXPLOSION DATA**

**FLASH POINT: 200 F (Tag Closed Cup)**  
**FLAMMABLE LIMITS: Not Available**  
**EXTINGUISHING MEDIA: Alcohol foam, carbon dioxide, dry chemical**  
**SPECIAL FIRE FIGHTING PROCEDURES: None**  
**UNUSUAL FIRE AND EXPLOSION HAZARDS: None**

**IV. REACTIVITY DATA**

**STABILITY: Stable**  
**CONDITIONS TO AVOID: Extreme heat**  
**INCOMPATIBILITY: Strong oxidizing agents, strong acids, mineral acids**  
**DECOMPOSITION OF PRODUCTS: None**

**V. HEALTH AND HAZARD DATA**

**ACUTE EFFECTS: This product has not been tested. The following information is based on test results from technical grade active ingredients:**

Cyclohexylamine..... Acute Oral LD50 = 156 mg/kg  
Acute Dermal LD50 = 280 mg/kg  
Morpholine..... Acute Oral LD50 = 1050 mg/kg  
Acute Dermal LD50 = 500 mg/kg  
Acute Inhalation LC50 = 1320 mg/m3  
Diethylethanolamine.. Acute Oral LD50 = 1300 mg/kg  
Acute Dermal LD50 = 1260 mg/kg

**CARCINOGENIC POTENTIAL:** Not listed in any of OSHA Standard, Section 1910.1200 sources as carcinogenic. Neither the morpholine nor the cyclohexylamine is considered to be an animal carcinogen.

**SENSITIZATION EFFECTS:** Possible skin sensitizer.

**OTHER HEALTH EFFECTS:** Repeated inhalation may produce inflammation of the gastrointestinal tract. Repeated dermal exposure may result in dermatitis. Chronic exposure may result in damage to the liver, kidneys and lungs. Morpholine is weakly mutagenic in some in vitro genotoxicity assays. Cyclohexylamine has produced embryotoxicity, low birth count, postnatal mortality and decreased body weight in laboratory animals. Cyclohexylamine administered in the diet to mice induced testicular atrophy.

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## VI. EMERGENCY RESPONSE INSTRUCTIONS

**EYE CONTACT:** Flush immediately with copious amounts of tap water or normal saline (minimum), for 15 minutes. Take exposed individual to a health care professional preferably an ophthalmologist, for further evaluation.

**SKIN CONTACT:** Wash exposed area with plenty of soap and water. Repeat washing. Rinse exposed area for at least 15 minutes. Consult a health care professional. If clothing comes in contact with the product, the clothing should be removed immediately and should be laundered before reuse.

**INGESTION:** DO NOT INDUCE VOMITING. Rinse mouth with copious amounts of water or milk first. Then slowly dilute stomach contents with 6 to 8 ounces of water. In cases where the individual is semiconscious, comatose or convulsing, DO NOT GIVE FLUIDS BY MOUTH.

**INHALATION:** If a person experiences nausea, headache or dizziness, immediately move exposed individual to fresh air. If individual has difficulty in breathing or is cyanotic administer oxygen, if available. Call a physician.

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## VII. SPILL, DISPOSAL, AND FIRE PROCEDURES

**SPILL PROCEDURES:** Initially minimize area effected by the spill or leak. Block any potential routes to water

systems. Assess the impact on contaminated environments and minimize any adverse effects. Contact your J & M representative immediately. Determine if federal, state, and/or local release notification is required. Recover as much of the pure product as possible into appropriate containers. Clay, soil, or commercially available absorbents may be used to recover any material that can not readily be recovered as pure product. Contact the person(s) responsible for the operation of your facility's industrial sewer system prior to intentionally flushing or pumping spills or leaks of this product to the industrial sewer if applicable.

**DISPOSAL PROCEDURES:** Follow federal, state, and local regulations governing the disposal of waste materials. Determine if waste containing this product can be handled by available industrial effluent system or other on-site waste management. This product is not specifically listed in 40 CFR 261 as a Resource Conservation and Recovery Act hazardous waste. However, spill or leak residuals may meet the criteria of a characteristic hazardous waste under this Act.

**CONTAINER DISPOSAL:** J & M will accept any empty drum assuming that no foreign material has been placed therein, and that the drum was returned in satisfactory condition.

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#### VIII. SPECIAL INFORMATION

**Respiratory PROTECTION:** None required unless large amounts are handled in an emergency. In such a situation, a gas mask should be used.

**VENTILATION:** Local exhaust should be adequate

**PROTECTIVE GLOVES:** Rubber gloves required

**EYE PROTECTION:** Protective goggles required

**OTHER PROTECTIVE EQUIPMENT:** None required

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#### IX. SPECIAL PRECAUTIONS

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Follow normal procedures

**OTHER PRECAUTIONS:** None necessary

**USDA ACCEPTANCE:** G-6 = 1500 is acceptable for treating boiler or steam lines where the steam produced may contact edible products in official establishments operating under the Federal meat, poultry, shell egg grading, and egg products inspection program.

Product: 1500

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EPA REGISTRATION: Not applicable

TSCA INVENTORY: All components included in the Inventory

FDA REGULATIONS: Not applicable

SARA 302 EXTREMELY HAZARDOUS SUBSTANCES LIST: No components of this product are listed.

SARA 312 HAZARD CLASSIFICATION: Immediate Health Hazard, Chronic Health Hazard and Fire Hazard.

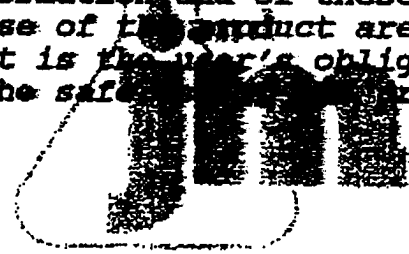
SARA 313 TOXIC CHEMICALS LIST: No components of this product are listed.

NPCA/HMIS RATINGS: HEALTH 3; FLAMMABILITY 2; REACTIVITY 1

NFPA RATINGS: HEALTH 3; FLAMMABILITY 2; REACTIVITY 1

NOTE--

The opinions expressed are those of qualified experts within J & M. We believe that the information contained is current as of the date of this Material Safety Data Sheet. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of J & M, it is the user's obligation to determine the conditions of the safe use of the product.







CARGILL SALT  
LESLIE SALT CO.  
A CARGILL COMPANY

# PRODUCT SAFETY DATA SHEET

## A. GENERAL INFORMATION

TRADE NAME (COMMON NAME OR SYNONYM) Salt		C.A.S. NO. 7647-14	
CHEMICAL NAME Sodium Chloride	FORMULA NaCl	MOLECULAR WEIGHT 58.4428	
ADDRESS Cargill Salt Division P.O. Box 5621 Minneapolis, MN 55440 Leslie Salt Co. P.O. Box 364 Newark, CA 94560			
CONTACT National Technical Director	PHONE NUMBER (612) 475-6581	DATE ISSUED 8/1/85	DATE REVISED Same

## B. FIRST AID MEASURES

Skin: Wash with water. Eyes: Irrigate with plenty of water.	EMERGENCY PHONE NUMBER (612) 476-1127
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## C. HAZARDS INFORMATION HEALTH (Reference (a).)

INHALATION Inhalation of product may cause mild irritation of nose and throat.	
INGESTION Ingestion of large amounts (greater than 0.1 pound) may cause gastro-intestinal upset.	
SKIN Dust may cause mild irritation.	
EYES Dust may cause irritation.	
PERMISSIBLE CONCENTRATION AIR None established.	BIOLOGICAL No TLV established.
UNUSUAL CHRONIC TOXICITY None.	

# F. PHYSICAL DATA

MATERIAL IS (AT NORMAL CONDITIONS): <input type="checkbox"/> LIQUID <input checked="" type="checkbox"/> SOLID <input type="checkbox"/> GAS <input type="checkbox"/> _____		APPEARANCE AND ODOR White crystalline solid. Slight saline odor.	
BOILING POINT	1465°C	SPECIFIC GRAVITY (H <sub>2</sub> O = 1) 2.16	VAPOUR DENSITY (AIR = 1) NA
MELTING POINT	800°C		
SOLUBILITY IN WATER (% BY WEIGHT)  26.395 Max. at 60°F		pH (20% SOLUTION)  6.5 - 9.5	VAPOUR PRESSURE (mm Hg at 20°C)  2.4mm at 746.9°C

# G. REACTIVITY DATA

STABILITY  <input checked="" type="checkbox"/> STABLE <input type="checkbox"/> UNSTABLE	CONDITIONS TO AVOID Wet/damp conditions can cause caking and corrosion.
INCOMPATIBILITY (MATERIALS TO AVOID)  None provided the product is dry.	
HAZARDOUS DECOMPOSITION PRODUCTS  None.	
HAZARDOUS POLYMERIZATION  <input type="checkbox"/> MAY OCCUR <input checked="" type="checkbox"/> WILL NOT OCCUR	CONDITIONS TO AVOID

# H. HAZARDOUS INGREDIENTS (Mixtures Only)

MATERIAL OR COMPONENT /C.A.S. NO.	WEIGHT %	HAZARD DATA (SEE SECTION J)

I. ENVIRONMENTAL

**DEGRADABILITY/AQUATIC TOXICITY**

Product is inorganic and may persist in the environment.

**EPA HAZARDOUS SUBSTANCE?**

☐ YES

☒ NO

IF SO, REPORTABLE QUANTITY: \_\_\_\_\_ #

40 CFR  
116-117

**WASTE DISPOSAL METHODS (DISPOSER MUST COMPLY WITH FEDERAL, STATE AND LOCAL DISPOSAL OR DISCHARGE LAWS)**

Flush to sewer if permitted by applicable disposal regulations.

**RCRA STATUS OF UNUSED MATERIAL:**

Not a "hazardous waste".

40 CFR  
261

J. REFERENCES

**PERMISSIBLE CONCENTRATION REFERENCES**

**REGULATORY STANDARDS**

D.O.T. CLASSIFICATION:

NA

49 CFR

FDA regulations apply to food use and USP/NF grades (21 CFR).  
USDA regulations apply to use in meat and poultry products.

**GENERAL**

(a) Recommendations of the Salt Institute.

K. ADDITIONAL INFORMATION

This product is not for food or drug use unless material is labeled "food grade," "USP grade," or "NF grade," as applicable.

This product safety data sheet is offered solely for your information, consideration and investigation.

Cargill Salt Division/Leslie Salt Co. provides no warranties, either express or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein.